

DЗ З. "НОВОСОБАТЕРІЯ ОСТІ"

$$\{a_n\}_{n=1}^{\infty} = 2^n - n$$

БОЗРАКТАНУС АҚ

$$\lim_{n \rightarrow \infty} 2^n - n = (\infty - \infty) = \frac{(2^n - n) \cdot \frac{1}{2^n}}{2^n} =$$
$$= \frac{1 - \frac{n}{2^n}}{\frac{1}{2^n}} \xrightarrow[0]{\frac{1}{2^n}} = \frac{1}{0} = \infty$$

$$\text{ннн } n(2^{n-1} - 1) = (\infty \cdot \infty) = \infty$$

$$a_5 = 2^5 - 5 = 27$$

$$\overline{(b_n)}_{n=2}^{\infty} = \frac{1}{1-n} \quad \text{БОЗРАКТАНУС АҚ}$$

$$\lim_{n \rightarrow \infty} \frac{1}{1-\frac{1}{2^n}} = 0 \quad b_5 = \frac{1}{1-5} = -\frac{1}{4}$$

$$\overline{\{c_n\}}_{n=1}^{\infty} = -1^n + \sqrt{2n} = -1 + \sqrt{2n} \quad (\text{T.R. } 1^n = 1)$$

БОЗРАКТАНУС АҚ

$$\lim_{n \rightarrow \infty} -1^n + \sqrt{2n} = \infty$$

$$c_5 = -1^5 + \sqrt{10} = -1 + \sqrt{10} = \sqrt{10} - 1$$

$$\overline{\{d_n\}}_{n=2}^{\infty} = (-1)^{2n} + \frac{1}{n^2}, \quad \begin{array}{l} \text{ГЕНРНБ} \\ \text{ЧЕТАР} \end{array} \Rightarrow (-1)^{2n} = 1 \quad \text{БСЕРГА}$$

$$\lim_{n \rightarrow \infty} 1 + \frac{1}{n^2} \xrightarrow[0]{\frac{1}{n^2}} = 1. \quad \text{МОНОТОННО} \quad \text{ҮЗИКАЛУС АҚ}$$

$$d_5 = 1 + \frac{1}{25} = 1.04$$

$$a_1 = 128, a_{n+1} - a_n = 6$$

$$a_n = a_1 + 6(n-1)$$

$$a_{12} = a_1 + 6(12-1) = 128 + 6 \times 11 = 194$$